

REMARKS/ARGUMENTS

At paragraph 2 of the Detailed Action, the drawings are objected to as not showing every feature of the invention specified in the claims. Fig. 2B is amended to show the main storage 110 containing multiple images 110a-110n, as claimed in claims 1 and 14.

As suggested by the examiner in paragraph 3, claim 14 has been amended to replace "storage" with --storage;--.

At paragraph 4, claims 1 and 14 are rejected under 35 U.S.C. 112, second paragraph since separate images are not adequately disclosed. The specification at page 7, line 24 to page 8, line 14 has been amended to explain that the main storage 110 contains separate images, each for including an application server. The amendment also makes clear that the main storage includes a plurality of queues, and a queuing mechanism. This is not new matter (see page 8, line 17, page 10, lines 21-24, page 16, lines 11-15 and original claim 1). It is submitted that the specification does support multiple images in the main storage as explained at page 10, lines 21-24 and page 16, lines 11-15. It is submitted that establishing multiple host images in the main storage for multiple virtual guests and/or multiple logical partitions is well understood in the art. It is respectfully submitted that claims 1 and 14 are supported by the specification and are allowable under 35 U.S.C. 112, second paragraph, which allowance is respectfully requested.

In the office action, under Claim Rejections - 35 USC 103, paragraphs 1-15, claims 1-2, 4, 6, 10-13, 14-15, and 19-20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over

Caldarale et al. (hereinafter "Caldarale", 5,659,794) in view of Provino et al. (hereinafter "Provino", 5,778,384).

As set forth in previous amendments, Caldarale discloses a network input/output system for sending and receiving messages between a large scale computer system and associated communications networks. Caldarale describes a main storage capable of establishing communication between application servers and application users wherein the main storage is only accessible by means of a single Operating System environment (Application Server). Only one input, output and control (UPICT) queue is defined. The Network Interface Controller is totally dedicated to the single Operating System environment. Caldarale describes the ability to control multiple I/O devices through the same interface. Caldarale discloses multiple Network Interface Controllers (NIC) in a single Application Server see Col. 7, line 35). In Caldarale, there is only one main storage unit 24 shown in Fig. 1, and there is no teaching or suggestion that the main storage unit may contain more than one image, each image containing a separate application server, as claimed.

In the present invention, communication is provided to multiple application servers, each provided with a separate image provided for virtual systems, each virtual system assigned to a separate queue set in the queuing mechanism (see page 20, lines 21-24). virtual systems in the main storage as claimed in claims 1 and 14. Claims 1 and 14 make clear that the claimed apparatus establishes processing communication with more than one application server. An interrogator is claimed for examining multiple queues in the queue mechanism to transfer appropriate requests, responses and data between multiple application servers and an application user, thus having the ability to manage queues from multiple different application servers, not just a single

application server as in Calderale. this ability is fully explained at page 16, lines 11-21 of the specification.

Provino is directed to a virtual file system accessing subsystem for use in connection with a computer system connected in a computer network. The computers are of the conventional stored-program computer architecture, each having mass storage (see Col. 5, lines 3-5). There is no teaching or suggestion in Provino that the mass storage on any of the computers may be separated into multiple images, with an application server in a separate image. Each computer in the network of Provino has only one operating system. The operating systems that are mentioned are the Unix operating system (Col. 2, line 26), MS-DOS and Windows (Col. 2, line 40) and Microsoft Windows-NT (Col. 5, line 49). As discussed above, one of the operating systems may reside at a time in the main storage of a computer of the network of Provino. In the present invention claimed in claims 1 and 14, all of these operating system may reside in the claimed main storage, each in its own image. Also, it is well known that each of the operating systems of Provino is interrupt driven. In Provino, if there is no interrupt, there is no communications. For the examiners information, User's Guide Microsoft Windows Operating System Version 3.1, 1985-1993 is enclosed; pages 189, 190, describing how to set the Interrupt Request Line (IRQ), page 239 for the proper of the IRQ for the mouse, page 251 for the proper IRQ for printing from Windows, and page 263 for the proper IRQ for accessing a serial port. Also enclosed is computer generated instructions for Windows 98, Microsoft Corp. 1981-1998, showing how to change the resource settings for a hardware device, and an example of the Interrupt Request (14) for a PCI Bus Master Controller and an Interrupt Request "06" for a Standard Floppy Disk Controller.

In the present invention claimed in claims 1 and 14, the main storage contains a queuing mechanism for retrieval and storage of incoming and outgoing data without causing interrupts in an running programs (claim 1), or a plurality of queues located in main storage for providing continuous running of programs without interruptions. There is no teaching or suggestion in Provino that data may be retrieved or stored without interrupts, because in the operating systems of Provino, interrupts are required to retrieve or store data.

It is respectfully submitted that claims 1 and 14, and all claims depended therefrom are allowable under 35 U.S.C. 103(a) over Caldarale in view of Provino, which allowance is respectfully requested.

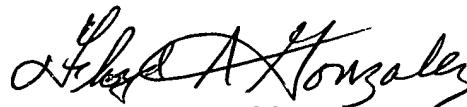
Under Claim Rejection - 35 USC 103, claims 5, 7, 8, 3, 16, 9, 18, 21 and 22 are rejected under 35 U.S.C. 103 (a). Carbillet cited by the examiner is an information processing system comprising at least two processors. In Carbillet, when an exchange of data is necessary, for example, when the processor of a first module wishes to read the static memory of a second module, the processor of the second module is temporarily put in stand-by mode. Thus in Carbillet, there is an interruption in running programs when data is exchanged. In Brandt et al. cited by the examiner, an improved high-speed data communications system is disclosed. In Brandt, there is no teaching or suggestion that main storage may have a separate image for each application server. In Casper, cited by the examiner, an attached storage media line having a self-timed interface is disclosed. There is no teaching or suggestion that main storage may have a separate image for each application server. In Leger et al. cited by the examiner, a CMA controller having multiple channel and buffer pool is disclosed. There is no teaching or suggestion that the

main storage may have a separate image for each application server. It is respectfully that the remaining claims are allowable under 35 U.S.C. 103(a) over the Caldara in view of Provino further in view of any combination of Carbillet, Brandt, Casper, or Leger, which allowance is respectfully requested.

The newly cited art has been examined and is not believed to anticipate or make obvious, either alone or in combination, the claims remaining in the application.

It is respectfully submitted that the application is now in condition for allowance, which allowance is respectfully requested.

RESPECTFULLY SUBMITTED



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